a support configured to transmit all or part of a fluorescence signal emitted in response to an excitation signal and configured to support a plurality of areal samples constituting as many recognition zones; and

~~a liquid medium flooding the areal samples;~~

a thin layer of a material interposed between the support and the areal samples, the thin layer material having a refractive index greater than a refractive index of the support and than a refractive index of ~~the liquid~~ a medium flooding the areal sample during a fluorescence measurement, a thickness of the thin layer being chosen so that the excitation and fluorescence signals pass in almost normal incidence through the thin layer, whereby the thin layer transmits all or part of the fluorescence signal.

21. (Previously Presented) The process according to 11, further comprising positioning the support in a casing.

22. (Previously Presented) The process according to 21, wherein the liquid medium is positioned within the casing.

Remarks

Favorable reconsideration of this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Applicants respectfully request entry of this response, as the response places the application in clear condition for allowance, or alternatively at least places the claims in better form for appeal. Specifically, Applicants have amended rejected independent claims to recite features that are not taught or suggested by references of record.

Upon entry of this response, Claims 11-22 are pending; independent Claims 11, 19, and 20 having been presently amended. Applicants respectfully assert that support for the changes to the claims is self-evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.[1]

In the outstanding Office Action, Claims 11-13 and 16-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,822,472 to Danielzik et al. (Danielzik). Claims 14-16, 21, and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Danielzik. Applicants respectfully assert that the above amendments to the claims have overcome the rejections for the following reasons.

The present invention is directed to a process for amplifying a fluorescence signal emitted by an areal sample in response to an excitation signal, a device amplifying fluorescence emitted by an areal sample, and biochip for reading by fluorescence. Independent Claim 11 recites interposing a thin layer between a support and an areal sample, the thin layer having a refractive index greater than a refractive index of the support and than a refractive index of a medium flooding the areal sample. Independent Claim 19 recites a support configured to transmit all or part of a fluorescence signal emitted in response to an excitation signal and configured to support an areal sample, and a thin layer interposed

[1] Please see, for example, from page 5, line 33 to page 6, line 2, of Applicants' originally filed specification.

between the support and the areal sample, the thin layer having a refractive index greater than a refractive index of the support and than a refractive index of a medium flooding the areal sample during a measurement of fluorescence. Independent Claim 20 recites a support configured to transmit all or part of a fluorescence signal emitted in response to an excitation signal and configured to support a plurality of areal samples constituting as many recognition zones, and a thin layer of a material interposed between the support and the areal samples, the thin layer material having a refractive index greater than a refractive index of the support and than a refractive index of a medium flooding the areal sample during a fluorescence measurement. Each of independent Claims 11, 19, and 20 further recites that a thickness of the thin layer is selected or chosen so that the excitation and fluorescence signals pass in almost normal incidence through the thin layer, whereby the thin layer transmits all or part of the fluorescence signal.

Danielzik is directed to a process for detecting evanescently excited luminescence. As shown in Figure 1, for example, of Danielzik, 1 is a sensor platform, 2 is a coupling grating for coupling in excitation radiation, 3 is a grating for coupling out luminescence, 4 is a waveguiding layer, and 5 is a substrate.[2]

Applicants respectfully assert that Danielzik does not teach, however, the claimed features of a thickness of the thin layer selected or chosen so that excitation and fluorescence signals pass in almost normal incidence through the thin layer, as recited in independent Claims 11, 19, and 20. Rather, as discussed above, Danielzik states that the layer 4 is a waveguiding layer.

Specifically, independent Claim 11 recites "a thickness of the thin layer being selected so that the excitation and fluorescence signals pass in almost normal incidence through the thin layer," and independent Claims 19 and 20 recite "a thickness of the thin

[2] Column 6, lines 5-8.